Far Eastern Entomologist

Дальневосточный энтомолог

Journal published by Far East Branch
of the Russian Entomological Society
and Laboratory of Entomology,
Institute of Biology and Soil Science,
Vladivostok

Number 226: 1-11 ISSN 1026-051X May 2011

NEW DATA ON GRASSFLIES OF THE FAMILY CHLOROPIDAE (DIPTERA) FROM KOREA WITH ANALYSIS OF THE FAUNA COMPOSITION

E.P. Nartshuk[1] and Ding Yang[2]

1) *Zoological Institute Russian Academy of Sciences, Universitetskaya nab.1. St. Petersburg 199034 Russia. E-mail: chlorops@zin.ru*

2) *Department of Entomology, China Agricultural University, Beijing, 100193, China. E-mail: dyangcau@126.com*

Seventeen species of the subfamily Chloropinae (Chloropidae) are recorded from North Korea, generic affiliation being given for two species based on material from the collection of Institute of zoology of Polish Academy of Sciences, Warsaw. Seven species are recorded from Korea for the first time. Biogeographical analysis is given for 69 species up to now known from the Korean Peninsula. The largest complex composes from Eastern Palaearctic species – 25, Northern Palaearctic complex includes 21, and Oriental – 8 species.

KEY WORDS: Diptera, Chloropidae, Korea, fauna, biogeography.

Э.П. Нарчук[1], Дин Ян[2]. Новые сведения о злаковых мухах семейства Chloropidae (Diptera) Кореи с анализом состава фауны // Дальневосточный энтомолог. 2011. N 226. С. 1-11.

По материалам Института зоологии Польской академии наук, Варшава 17 видов подсемейства Chloropinae (Chloropidae) зарегистрированы в Северной Корее, из них два вида определены только до рода. Семь видов впервые указаны для Кореи. Проведен биогеографический анализ 69 видов Chloropidae, известных из Кореи. Наибольшее число видов (25) относятся к восточно-

палеарктическому комплексу, 21– к северо-палеарктическому и 8 видов имеют ориентальное распространение.

1) *Зоологический институт РАН, Университетская наб., 1, Санкт-Петербург, 199034, Россия.*
2) *Отдел энтомологии Китайского сельскохозяйственного института, Пекин, 100193, Китайская Народная Республика.*

INTRODUCTION

The family Chloropidae has been insufficient studied in Korea in spite of large size of family and economic importance of some species. The entomologists of the Institute of Zoology of Polish Academy of Sciences, Warsaw collected insects in North Korea in 1959, 1965, 1969, and 1970. The collection includes some Chloropidae (Diptera). A part of this collection (subfamily Oscinellinae) was treated and published (Nartshuk, 2005). This paper deals with subfamily Chloropinae from this collection. Information on these expeditions was published by Mroczkowski (1972).

Names of collectors were abbreviated in the material as follows: AR – A. Riedel, BP – B. Pisarski, CD – C. Dziadsz, HS – H. Szelęgiewicz, JP – J. Prószyński, MM – M. Mroczkowski, RB – R. Belawski. Other abbreviations are: distr. – district, Mts. – mountains, prov. – province.

LIST OF SPECIES

Subfamily Chloropinae

Centorisoma flavum Nartshuk, 1965

MATERIAL. Prov. Hamhyng-si, Hingpong-ri, distr. Hamdžu, ca 15 km W Hamhyng, 12.VI 1965, 1♀ (MM, AR).

DISTRIBUTION. Russia: from Altai to Primorskii krai. New species to the fauna of Korea.

Centorisoma ussuriense Nartshuk, 1965

MATERIAL. Onpho ad Chonhjin, 16, 21.VIII 1959, 3 ♀ (BP, JP).

DISTRIBUTION. Russian Far East: Amurskaya oblast, Primorskii krai, Japan. New species to the fauna of Korea.

BIONOMICS. Larvae probably phytophagous, host-plant unknown.

Cetema cereris (Fallén, 1820)

MATERIAL. Onpho ad Chongjin, 16.VIII 1959, 1 ♀ (BP, JP).

DISTRIBUTION. Widely distributed in the Palaearctic region, from Europe to Japan (Hokkaido). New species to the fauna of Korea.

BIONOMICS. Larvae phytophagous, feeding on grasses from the genera *Agrostis, Alopecurus, Poa.*

Chlorops (Asianochlorops) leymi Nartshuk, 1979

MATERIAL. Prov. Hamhyng-si, Hyngnam, 11.VI 1969, 1 ♀ (MM, AR).

DISTRIBUTION. Russia: Primorskii krai, Sakhalin, Kuril Island (Shikotan), Japan from Hokkaido to Okinawa (Fig. 2). Littoral species. New species to the fauna of Korea.

BIONOMICS. The larvae are phytophagous, develop in shoots of *Leymus mollis* Trin. (Nartshuk, 1979).

Chlorops rufinus Zetterstedt, 1866

MATERIAL. Prov. Phjŏongjang-si, Mankjongde, 31.VIII 1970, 2 ♂ (RB, MM).

DISTRIBUTION. Widely distributed in the Palaearctic region from Europe to Japan (Hokkaido). New species to the fauna of Korea.

BIONOMICS. The larvae probably phytophagous like other species of the genus, but host plant unknown.

Chlorops serenus Loew, 1866

MATERIAL. Čhŏngdžin, 10.IX 1970, 1♀ (RB, MM).

DISTRIBUTION. Palaearctic species, known from Europe to Korea where was recorded in North Korea (Ismay & Lee, 1998).

BIONOMICS. The larvae are probably phytophagous like other species of the genus, but host plant is unknown.

Chlorops sp.

MATERIAL. Prov. Hamhyng-si: Hungpong-ri, distr. Hamžu, 12.?VI 1965, 1♀ (MM, AR).

Chloropsina minima (Becker, 1911)

MATERIAL. Myohyang Mts, 5, 25.VIII 1959, 2♂, 2♀ (BP, JP).

The species was described from Taiwan in the genus *Chlorops* Meigen and transfered into the genus *Chloropsina* Becker by Kanmiya (1983), who found the species in Japan. New record for the fauna of Korea.

DISTRIBUTION. Korea, southern Japan (Miyako and Iriomote Is.), Taiwan, Philippines, Indonesia (Java, Sumatra).

Lasiosina sp.

MATERIAL. Pyonggyang, 21.VII 1959, 1♀ (BP, JP).

BIONOMICS. Larvae probably are secondary invaders of plants like other species of the genus.

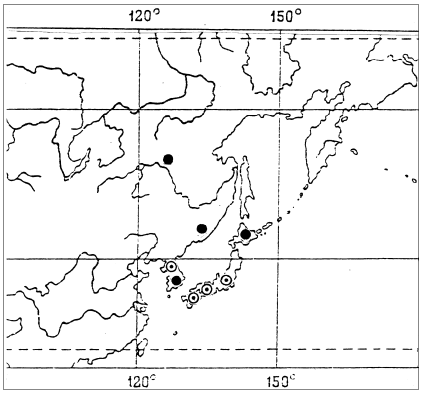


Fig. 1. Distribution of *Centorisoma ussuri-ense* Nartshuk (black circles) and *Meromyza grandifemoris* Kanmiya (circles with point).

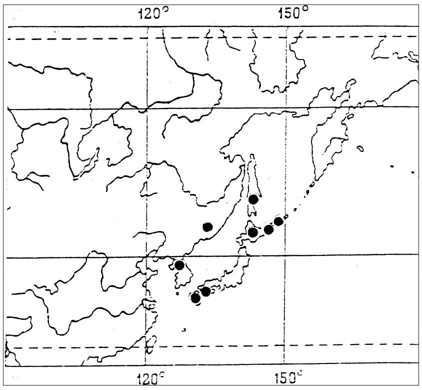


Fig. 2. Distribution of *Chlorops (Asiano-chlorops) leymi* Nartshuk.

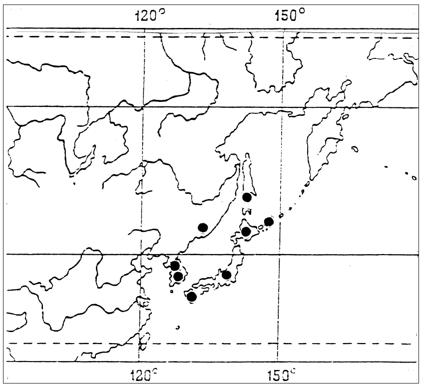


Fig. 3. Distribution of M*eromyza orientalis* Fedoseeva.

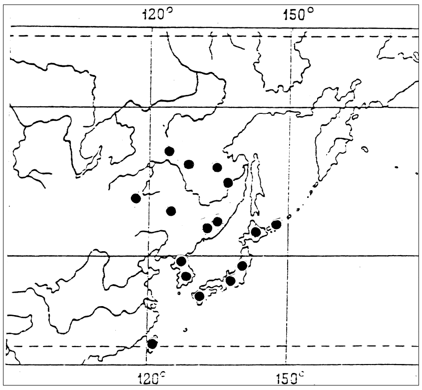


Fig. 4. Distribution of *Conioscinella divitis* Nartshuk.

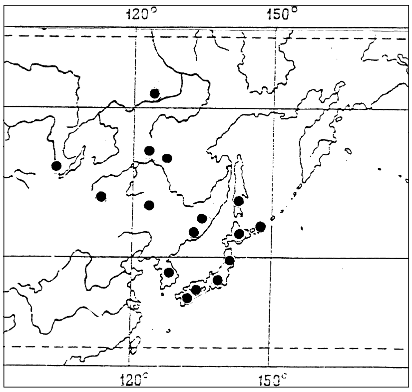


Fig. 5. Distribution of *Lasiosina orientalis* Nartshuk.

NOTES. The specimen belongs to the species group *L. littoralis* without rhomboid black spot on tip of the ocellar triangle. The species can only be identified from the male genitalia and the available specimen is a female. It is included so that genus can be recorded from Korea.

Meromyza grandifemoris Kanmiya, 1983

MATERIAL. Dephun ad Kujang-dong, 5-6.IX1959, 2♂ (BP).

DISTRIBUTION. Korea and Japan (Kanmiya, 1983; Nartshuk, 2005) (Fig. 1).

BIONOMICS. Larvae phytophagous, develop on wild grasses (Poaceae) and occasionally attack wheat in Japan (Kanmiya, 1983).

Meromyza ornata (Wiedemann, 1817)

MATERIAL. Prov. Phjongan-namdo, Vsan-ri ad Nampho, 28.VIII 1965, 1♂, 1♀ (MM, AR).

DISTRIBUTION. Widely distributed in the Palaearctic region, from Europe to Russian Far East. This species was recorded from Korea as *M. sororcula* Fedoseeva (Ismay & Lee, 1998).

BIONOMICS.Larvae are phytophagous, develop in shoots of *Deschampsia caespitosa* (Poaceae).

Pachylophus rufescens de Meijere, 1904

MATERIAL. Total 10 ♂, 55 ♀: Vall. Munsu-tong, Mts. Mjohjang-san, distr. Hjansan, 18-19.VI 1965 (MM, AR); prov. Phjŏngjang-si, Mankjŏngde, 31.VIII 1970 (RB, MM); prov. Phjŏngan-namdo, Vsan-ri ad Nampho, 28.V 1965 (MM, AR); prov. Hamgjŏng-namdo, Thesong, distr. Kangsŏ, 26.V1965 (MM, AR); Dephun ad Kujang-dong, 5-6.IX 1959 (BP); Diuyr ad Chongjin, 24.VIII1959 (BP, JP); prov. Kangvŏn-do, Chonne, 10.VI 1965 (MM, AR); Pyongyang, 11, 21.VII, 6, 12.IX 1959 (BP, JP); Sŏkam-Juvŏndži, distr. Sunan, 21.V1965 (MM, AR); Onpho ad Chongjin, 14-16, 21.VIII 1959 (BP, JP); prov. Phjŏgjang-si, Sŏngmun-ri, distr. Samsŏk, 22.V 1965 (MM, AR); prov. Hamgjŏng-namdo, Jŏnpong-ri, distr. Nongvŏn, 8.VI 1965 (MM, AR); Mts. Mjohiang-san, Hjangam-ri, distr. Hjangsan, 16-22.VI 1965 (MM, AR); prov. Kosong-si, Nakjŏng, 27.VIII 1966 (HS, CD); prov. Phjŏngan-nambo, Sŏkam-Juvondži, distr. Sunan, 21.V 1965 (MM, AR); Mts. Mjohjang-san, distr. Hjangsan, 19.VI 1965 (MM, AR).

DISTRIBUTION. Widely distributed in Japan, China, South East Asia and Australia. The most western record – East Pakistan.

NOTES. Very common species in Korea, was early recorded by Kanmiya & Slovák, 1991; Ismay & Lee, 1998; Female viviparous, a larva develops in female abdomen (Nartshuk, 1991). Larvae probably phytophagous, like other species of the genus.

Semaranga dorsocentralis Becker, 1911

MATERIAL. Total 2 ♂, 1 ♀: Myohjang Mts, 3.VIII 1959 (BP, JP); prov. Hamgjong-pukto, 4.VI 1965 (MM, AR); Pyongyang, 12.IX 1959 (BP).
DISTRIBUTION. Widely distributed in the Oriental and Afrotropical regions, North Australia and Eastern Palaearctic: Russian Far East, Japan, China. New species to the fauna of Korea.
BIONOMICS. Unknown, but probably larvae are phytophagous. Teneral flies have greenish abdomen as many phytophagous light coloured species of Chloropinae.

Steleocerellus cornifer (Becker, 1911)

MATERIAL. Myohyang Mts., 5.VIII 1959, 2 ♀ (BP, JP).
DISTRIBUTION. Widely distributed in South East Asia, China and Japan, was recorded in North Korea (Kanmiya & Slovák, 1991).
BIONOMICS. Larvae are saprophagous, feed in decaying tissue of Poaceae, including rice (Kanmiya, 1983).

Steleocerellus ensifer (Thomson, 1869)

MATERIAL. Pyongyang, 12-13.IX 1959, 1♂, 1♀ (BP).
DISTRIBUTION. Widely diastributed in South-East Asia, Japan and Primorskii krai of Russia (Nartshuk, 1969). This species was recorded from South Korea (Ismay & Lee, 1998).
BIONOMICS. The larvae are saprophagous, feed on decayed tissue of *Phragmites australis* (Kanmiya, 1977).

Thaumatomyia notata (Meigen, 1830)

MATERIAL. Dephun ad Kujang-dong, 6.IX 1959, 1 ♀ (BP).
DISTRIBUTION. Widelly distributed in the Palaearctic, Oriental and Afrotropical regions. The species was recorded from Korea (Kanmiya & Slovák, 1991; Ismay & Lee, 1998; Nartshuk, 2005).
BIONOMICS. Larvae are carnivorous, feed on root aphids.

Thaumatomyia rufa (Macquart, 1835)

MATERIAL. Total 7 ♂, 18 ♀: Diuyr ad Chongjin, 24.VIII 1959 (BP, JP); Onpho, ad Chonjin, 14-17.VIII 1959 (BP, JP); Myohyang Mts, 3-5, 25.VIII 1959 (BP, JP); Dephun ad Kujang-dong, 6.IX 1959 (BP); prov. Phjŏngjang-si, Sŏngmunri distr., Samsŏk, 22.V 1965 (MM, AR); Pyongyang, 21.VII 1959 (BP, JP).
DISTRIBUTION. Widely distributed in the Palaearctic region, from Europe to Japan. This species was recorded from Korea (Kanmiya & Slovák, 1991; Ismay & Lee, 1998; Nartshuk, 2005).
FOOD HABITS. Larvae are carnivorous, feed on root aphids.
NOTE. Ismay & Lee (1998) noted some differences from European specimens in the some details, but the species is very variable in colour and some details.

RESULTS AND DISCUSSION

There are three special publications on the grassflies (Chloropidae) of the Korean Peninsula. Kanmiya & Slovák (1991) treated the material from North Korea and listed 20 species, and 2 species identified to the genera level only. Three other species were recorded earlier (Kanmiya, 1983, 1989a). Ismay & Lee (1998) treated material from South Korea and listed 30 species, and four species identified to the genera level only. Twenty-two species were recorded for the first time from Korea, bringing the total 46 species. Nartshuk (2005) had material from North and South Korea and listed 28 species with 15 species new to the fauna including three new described species, bringing the total to 60 species in the Korean Peninsula. Present list contains 17 species and only genera affiliation is given for two species, seven species being recorded for the first time from Korea.

All species known from Korea are listed in the table with the number of collected specimens and data on distribution. The most abundant species are: *Elachiptera sibirica*, *E. insignis* and *Pachylophus rufescens* with number 100 or more collected specimens. Common species are *Polyodaspis ruficornis, Siphunculina stackelbergi, Centorisoma koreanum, Thaumatomyia notata, Th. rufa, Steleocerellus ensifer,* and *Cryptonevra inquilina,* each of them are presented by more than 20 specimens. All other species are rare.

Up to now 69 species are recorded from Korea (table): subfamily Siphonellopsinae – 1 species, subfamily Rhodesiellinae – 5 species in 2 genera, subfamily Oscinellinae – 33 species in 20 genera, subfamily Chloropinae – 30 species in 12 genera. Six species, three of them in two latter subfamilies are identified to the genus only. Apparently, this number constitutes nearly half of the expected number of species occurs in Korea. Only two species *Thaumatomyia notata* and *Th. rufa* are common in four examined collection, and *E. insignis* and *E. sibirica* – in three examined collections. There are 152 species in 57 genera in Japan (Kanmiya, 1983, 1987, 1989b; Nartshuk, 2006).

Chloropidae fauna of the Korean Peninsula composes from three main components: 1) widely distributed Palaearctic and Holarctic species; 2) species distributed in Eastern Palaearctic; 3) species with main part of its range in the Oriental region.

Generic composition. Subfamily Siphonellopsine is presented by a genus *Apotropina* Hendel of World distribution; subfamily Rhodesiellinae – by two genera, *Rhodesiella* Adans and *Scoliophthalmus* Becker, both distributed in the Palaearctic, Oriental, and Afrotropical regions. Subfamily Oscinellinae is presented by 20 genera, two of them, *Meijerella* Sabrosky and *Psilacrum* Becker, are Oriental, *Togeciphus* Nishijima – Palaearctic, *Incertella* Sabrosky, *Oscinisoma* Lioy, and *Hapleginella* Duda – Holarctic, other – of World distribution. Subfamily Chloropinae is presented by 12 genera, three of them *Pachylophus* Loew, *Steleocerellus* Frey, and *Semaranga* Becker are Oriental and Afrotropical, *Centorisoma* Becker – Palaearctic, *Cetema* and *Meromyza* Meigen – Holarctic, other of World distribution.

Table

List of Chloropidae recorded from the Korean Peninsula

Species	Specimens from:						Distribution
	1, 2	**3**	**4**	**5**	**6**	Total	
Subfamily Siphonellopsinae							
Apotropina japonica Kanmiya	-	1	5	-	-	6	Korea, Japan
Subfamily Rhodesiellinae							
Rhodesiella chosonica Nartshuk	-	-	-	1	-	1	Korea
Rhodesiella nitidifrons (Becker)	-	-	1	-	-	1	Korea, Japan, Oriental R.
Rhodesiella plumiger (Meigen)	-	-	-	3	-	3	Palaearctic R.
Scoliophthalmus formosanus (Duda)	-	-	1	-	-	1	Korea, Japan, China, Taiwan
Scoliophthalmus japonensis Kanmiya	-	-	1	-	-	1	Korea, Japan
Subfamily Oscinellinae							
Aphanotrigonum occultivirgatum Kanmiya	-	-	1	4	-	5	Korea, Japan
Aphanotrigonum trilineatum (Meigen)	-	-	-	1	-	1	Palaearctic R.
Calamoncosis duinensis (Strobl)	-	-	1	-	-	1	Palaearctic R.
Conioscinella divitis Nartshuk	-	1	-	10	-	11	Korea, Japan, RFE, Mongolia, Taiwan
Conioscinella gallarum (Duda)	-	-	1	1	-	2	Palaearctic R.
Conioscinella sancheong Nartshuk	-	-	-	6	-	6	Korea
Dicraeus fennicus Duda	-	-	-	3	-	3	Palaearctic R.
Dicraeus miscanthi Nartshuk	-	-	-	1	-	1	Korea, Japan, RFE
Dicraeus stackelbergi Nartshuk	-	1	-	-	-	1	Korea, Japan, RFE
Dicraeus sp.	-	-	1	-	-	1	
Elachiptera biculiminata Nishijima	-	-	12	1	-	13	Korea, Japan, Sakhalin, Kuril Is.
Elachiptera insignis (Thomson)	-	25	86	1	-	112	Korea, Japan, China, RFE, Taiwan
Elachiptera japonica Nishijima	-	1	-	-	-	1	Korea, Japan, Sakhalin, Kuril Is.
Elachiptera sibirica (Loew)	-	31	96	53	-	180	Palaearctic R.
Elachiptera tuberculifera (Corti)	-	-	1	-	-	1	Palaearctic R.
Hapleginella laevifrons (Loew)	-	-	-	1	-	1	Palaearctic R.
Gampsocera sp.	-	-	1	-	-	1	
Incertella albipalpis (Meigen)	-	-	-	3	-	3	Palaearctic R.
Lasiambia shatalkini Nartshuk	-	-	-	2	-	2	Korea, RFE
Oscinella frit (Linnaeus)	-	6	-	5	-	11	Multiregional
Oscinisoma ussuriense Nartshuk	-	-	-	1	-	1	Korea, Japan, RFE
Meijerella inaequalis (Becker)	-	-	3	-	-	3	Korea, Japan, China, Oriental R., Australasian R.
Polyodaspis ruficornis (Macquart)	-	3	5	18	-	36	Palaearctic R., Oriental R.
Pseudeurina miscanthi Nartshuk	-	-	-	1	-	1	Korea, Japan, RFE
Psilacrum sp.	-	-	-	1	-	1	
Rhopalopterum anthracinum (Meigen)	-	-	11	-	-	11	Palaearctic R.
Siphunculina aenea (Macquart)	*	-	-	-	-	*	Palaearctic R.
Siphunculina sharmani Cherian	-	-	1	-	-	1	Korea, Japan, Oriental R.
Siphunculina stackelbergi Duda	*	-	-	20	-	20	Korea, Japan, RFE, Mongolia
Speccafrons pallidinervis (Becker)	-	-	1	-	-	1	Korea, Japan, Oriental R.
Togeciphus katoi (Nishijima)	-	-	11	1	-	12	Korea, Japan, China
Tricimba japonica Dely-Draskovits	-	2	1	-	-	3	Korea, Japan
Tricimba lineella (Fallén)	-	-	-	1	-	1	Holarctic

Species	Specimens from:						Distribution
	1, 2	**3**	**4**	**5**	**6**	Total	
Subfamily Chloropinae							
Centorisoma flavum Nartshuk	-	-	-	-	1	1	Korea, RFE
Centorisoma koreanum Nartshuk	-	-	-	41	-	41	Korea
Centorisoma ussuriense Nartshuk	-	-	-	-	3	3	Korea, Japan, RFE
Cetema cereris (Fallén)	-	-	-	-	1	1	Palaearctic R.
Chlorops (Chlorops) corrugatus Kanmiya	-	1	-	1	-	2	Japan, Korea
Chlorops (Sclerophallus) limbatus Becker (as *C. brevimanus*)	-	1	16	-	-	17	Palaearctic R.
Chlorops (Asianochlorops) leymi Nartshuk	-	-	-	-	1	1	Korea, Japan, RFE
Chlorops (Chlorops) mugivorus Nishijima & Kanmiya	-	1	6	-	-	7	Korea, Japan
Chlorops (Chlorops) oryzae (Matsumura)	*	-	9	-	-	9	Korea, Japan, China
Chlorops (Chlorops) rufinus Zetterstedt	-	-	-	-	2	2	Palaearctic R.
Chlorops (Chlorops) serenus Loew	-	2	-	-	1	3	Palaearctic R.
Chlorops (Chlorops) sulcipalpis Nartshuk	-	3	-	-	-	3	Korea, Japan, RFE
Chlorops sp.	-	-	-	-	1	1	
Chloropsina minima (Becker)	-	-	-	-	2	2	Korea, Japan, Oriental R.
Chloropsina sp.	-	-	1	-	-	1	
Cryptonevra diadema (Meigen)	-	-	4	-	-	4	Palaearctic R.
Cryptonevra inqiulina Kanmiya	-	-	23	-	-	23	Korea, Japan
Lasiosina orientalis Nartshuk	-	-	1	-	-	1	Korea, Japan, China, RFE
Lasiosina sp.	-	2	-	-	1	3	
Meromyza grandifemoris Kanmiya	-	-	-	4	2	6	Korea, Japan
Meromyza orientalis Fedoseeva	-	8	4	-		12	Korea, Japan, RFE
Meromyza ornata (Wiedemann) (as *M. sororcula* Fedoseeva)	-	-	2	-	2	4	Palaearctic R.
Meromyza pratorum Meigen	-	4	-	-		4	Holarctic
Pachylophus rufescens (de Meijere)	-	6	29	-	65	100	Japan, Korea, China, Oriental R., Australia
Pseudopachychaeta sp.	-	-	2	-		2	
Semaranga dorsocentralis Becker	-	-	-	-	3	3	Korea, Japan, China, RFE, Oriental R., Afrotropical R., North Australia
Steleocerellus cornifer (Becker)	-	1	4	-	2	7	Korea, Japan, China, Oriental R., Afrotropical R.
Steleocerellus ensifer (Thomson)	-	30	-	-	2	32	Korea, Japan, China, RFE, Oriental R.
Thaumatomyia notata (Meigen)	-	15	3	1	1	20	Palaearctic R., Oriental R.
Thautomyia rufa (Macquart)	-	12	33	9	25	76	Palaearctic R., Oriental R.

Notes. Number of specimens from: **1** – Kanmiya, 1983; **2** – Kanmiya, 1989; **3** – Kanmiya & Slovák, 1991; **4** – Ismay & Lee, 1998, **5** – Nartshuk, 2005; **6** – present paper, * – number of specimens not recorded. Abbreviation: R – region, RFE – Russian Far East.

Species composition (table). Two species have Holarctic disribution, 17 species widely distributed in the Palaearctic region, one of them *Elachiptera sibirica* recorded also from Taiwan. These 19 species are formed northern component of fauna. The species with wide ranges in the Palaearctic and Oriental regions, and some of them

also in the Afrotropical region number 13: *Oscinella frit, Polyodaspis ruficornis, Thaumatomyia notata, Th. rufa, Meijerella inaequalis, Speccafrons pallidinervis, Siphunculina sharmani, Rhodesiella nitidifrons Chloropsina minima, Semaranga dorsocentralis, Pachylophus rufescens, Steleocerellus ensifer, S. cornifer.* Four former species of them widely distributed in the Palaearctic region, they may be added to the northern group of species, enlarged it to 23. Nine latter species are formed southern Oriental component part. All other species are formed Eastern Palaearctic component, which is the largest – 31 species. This component includes several group: species distributed in Korea, Japan and Russian Far East – 10 species (e.g. *Centorisoma ussuriense* – fig 1., *Chlorops (Asianochlorops) leymi* – fig 2; *Meromyza orientalis* – fig. 3); species know from Korea and Japan – nine species (e.g. *M. grandifemoris* – fig.1); species recorded in Korea and Russian Far-East – four species, in Korea, Japan and China – three species, in Korea, Japan, Russian Far East and China – two species (e.g. *Conioscinella divitis* – fig. 4, *Lasiosina orientalis* – fig. 5), and three species are know up to now only from Korea. The number of species in these subgroups will be changed with new material from Korea, Russian Far East and especially from China. Nevertheless Eastern Palaearctic complex of species is the largest – 31 species, northern Palaearctic includes 23 species and southern Oriental – 9 species. Eastern Palaearctic (Russian Far East, Korea, Japan, excluding southern small islands, north-eastern China) is the center of reach autochthonous fauna, the oldest in the Palaearctic region.

ACKNOWLEDGEMENTS

Our sincere thanks to all Polish colleagues A. Riedel, B. Pisarski, J. Prószyński, M. Mroczkowski, and R. Belawski, who collected flies in Korea. This work is supported by the Russian Foundation for Basic Research (projects No 11-04-00185a and No 11-04-10047k) and the Program of the Presidium of the Russian Academy of Sciences "Origin and Evolution of Biosphere".

REFERENCES

Ismay, J.W. & Lee, S.H. 1998. Notes on Korean Chloropidae (Diptera). *Korean Journal of applied Entomology*. 31(1): 1–7.

Kanmiya, K. 1977. Notes on the genus *Mepachymerus* Speiser from Japan and Formosa, with descriptions of four new species (Diptera, Chloropidae). *Kurume University Journal*. 26: 47-65.

Kanmiya, K. 1983. A systematic study of the Japanese Chloropidae (Diptera). *Memoirs of the entomological Society of Washington.* 11: 1–370.

Kanmiya, K. 1987. Records of three Chloropid genera new to Japan with descriptions of two new species (Diptera). *Kontyû*. 55(1): 80–89.

Kanmiya, K. 1989. Study on the eye-flies *Sipunculina* Rondani from Oriental region and Far East (Diptera, Chloropidae). *Japanense journal of sanitary zoology*. 40, suppl.: 65–89.

Kanmiya, K. & Slovák, M. 1991. A list of North Korean Chloropidae (Diptera). *Japanese Journal of entomology*. 59(3): 623–625.

Mroczkowski, M. 1972. Field investigations in the Democratic People's Republic of Korea by stuff members of the Institute of Zoology of the Polish Academy of Sciences. *Fragmenta Faunistica*. 18(17): 313–343.
Nartshuk, E.P. 1969. Some oriental-tropical species of Chloropidae (Diptera) in the fauna of South Primorie. *Zoologicheski zhurnal*. 48: 1048–1052. (In Russian).
Nartshuk, E.P. 1979. A new species of the genus *Chlorops* (Diptera, Chloropidae). Zoologicheski zhurnal. 58: 448–451. (In Russian).
Nartshuk, E.P. 1991. Diptera of the family Chloropidae from Vietnam and South China. *Proceedings of the Zoological Institute Russian Academy of Sciences*. 240: 77–119. (In Russian).
Nartshuk, E.P. 2005. Grassflies (Diptera, Chloropidae) from South Korea with review of species of the genus *Centorisoma* Becker. *Entomologicheckoe obozrenie*. 84(2): 437–454 (In Russian, English translation: *Entomological Review*. 2005. 85(4): 555–568).
Nartshuk, E.P. 2006. Addition to the fauna of grassflies (Diptera, Chloropidae) of Japan. *Zoologicheski zhurnal*. 85(8): 1034–1037. (In Russian, English translation: *Entomological Review*. 2006. 85(3): 244–254).

SHORT COMMUNICATION

S. Yu. Storozhenko[1)], G. A. Akulova[2)]. NEW RECORDS OF TETRIGIDAE (ORTHOPTERA) FROM NORTH-EAST ASIA. – Far Eastern Entomologist. 2011. N 226: 11-12.

Summary. The family Tetrigidae with two species *Tetrix fuliginosa* (Zetterstedt, 1828) and *T. bipunctata* (Linnaeus, 1758) is newly recorded from Chukotka. *T. tenuicornis* (Sahlberg, 1893) is firstly recorded from Magadanskaya oblast and Kamchatskii krai.
Key words: Orthoptera, Tetrigidae, Tetriginae, distribution, Russian Far East.

С. Ю. Стороженко[1)], Г. А. Акулова[2)]. Новые находки тетригид (Orthoptera: Tetrigidae) из Северо-Восточной Азии // Дальневосточный энтомолог. 2011. N 226. С. 11-12.

Резюме. Семейство Tetrigidae с двумя видами, *Tetrix fuliginosa* (Zetterstedt, 1828) и *T. bipunctata* (Linnaeus, 1758), впервые указывается для Чукотки, а *T. tenuicornis* (Sahlberg, 1893) впервые приводится для Магаданской области и Камчатского края.

INTRODUCTION

Only three species of the family Tetrigidae has been recorded from the northern part of the Russian Far East: *Tetrix subulata* (Linnaeus, 1761) and *T. bipunctata* known from Magadanskaya oblast, and *T. fuliginosa* from Magadanskaya oblast and Kamchatka Peninsula (Podgornaja, 1983; Storozhenko, 2009). Up to now Tetrigidae was unknown from Chukotka. New data on distribution of Tetrigidae are given below. The studied materials are deposited in the Zoological Institute, St. Petersburg, Russia.